



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,407	03/19/2004	Shinsuke Ikishima	UNIU79.021AUS	7353

20995 7590 03/25/2008  
KNOBBE MARTENS OLSON & BEAR LLP  
2040 MAIN STREET  
FOURTEENTH FLOOR  
IRVINE, CA 92614

EXAMINER
----------

DESAI, ANISH P

ART UNIT	PAPER NUMBER
----------	--------------

1794

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

03/25/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
eOAPilot@kmob.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/804,407	<b>Applicant(s)</b> IKISHIMA ET AL.	
	<b>Examiner</b> ANISH DESAI	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17, 18, 21-23 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17, 18, 21-23 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Applicant's arguments in response to the Office action dated 09/18/07 have been fully considered.
2. Claims 17, 18, 21-23, and 26 are pending. Claims 1-16, 19, 20, 24, 25, 27, and 28 are cancelled.
3. All of the previously made 35 USC Section 112-first and second paragraph rejections are moot, because claims that were rejected under the 35 USC Section 112 are cancelled.
4. It is noted that the previous Examiner had indicated claims 17, 18, 21-23, and 26 as allowable over the prior art of record. However, in view of newly discovered art the allowability of these claims is withdrawn. The Examiner apologizes to Applicant for any inconvenience. A new 102/103 rejection is made based on Tomoko et al. (JP 2001-232730, Machine translation provided). A new 103 rejection is made based on Tomoko et al. in view of Kazuji et al. (JP 2001-059068, Machine translation provided).

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1794

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17, 18, 22, and 23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tomoko et al. (JP 2001-232730, Machine translation provided).

6. Regarding claims 17 and 18, Tomoko discloses a plastic film having a polymeric base material formed of polyolefin such as polypropylene (0034) and a hard coat resin film having weatherability, transparency, scratch resistance, curl resistance and solvent resistance (abstract). The hard coat film of Tomoko is formed of resin layer which is formed by copolymerizing at least three kinds of (meth)acrylic monomers (abstract). Moreover, the hard coat resin of Tomoko is crosslinked (abstract). Further it is believed that the claim limitation of hydroxyl value of 20 to 80 KOH mg/g is disclosed by Tomoko at paragraph 0019. As to the claim limitation of methacrylic and/or acrylic polymer comprises a HALS-hybrid methacrylic or acrylic polymer, this limitation is believed to be disclosed by Tomoko reference. For example, Tomoko at paragraph 0009 discloses addition of a hindered amine system compound to the (meth)acrylate, and further at paragraph 0016 Tomoko discloses that UV absorber compound and light stabilizer (i.e. HALS) is incorporated into the acrylic polymer. As to the thickness of the substrate and the hard coating layer, Tomoko discloses that the thickness of the base (substrate) is 20-300 micrometers and the thickness of the hard coating layer is 0.5 to 15 micrometers (0041 and 0042).

7. With regards to claims 22 and 23, Tomoko provides a substrate film having a thickness of from 20-300 micrometers (0041). Additionally, Tomoko's disclosure in abstract, at paragraph 0023 relating to crosslinking agent, and at paragraph 0033 relating to solvent, and 0046 relating to coating methods read on nominal method steps of "providing a polymer solution comprising...having a hydroxyl value of...a crosslinking agent, and a solvent" and "applying the polymer solution to at least one side of the substrate". As to the claim limitations of hydroxyl value, as disclosed previously it is believed that the claim limitation of hydroxyl value of 20 to 80 KOH mg/g is necessarily disclosed by Tomoko at paragraph 0019. Moreover, the disclosure of Tomoko at 0022 and in abstract relating to crosslinking of the hard coating, at 0074 relating to irradiation using UV rays, and at 0042 relating to the thickness of the coating read on "curing the polymer solution to form hard coating layer...three-dimensional crosslinked structure". As to the HALS-hybrid methacrylic or acrylic polymer, as set forth previously this limitation is believed to be disclosed by Tomoko reference. For example, Tomoko at paragraph 0009 discloses addition of hindered amine system compound to the (meth)acrylate, and further at paragraph 0016 Tomoko discloses that UV absorber compound and light stabilizer (i.e. HALS) is incorporated into the acrylic polymer.

8. As to the claim requirement of the swelling rate of a substrate of no more than 5%, it is reasonable to presume that the substrate of Tomoko has swelling rate of no more than 5% as claimed. The support for said presumption is based on the fact that the plastic films of Tomoko and that of Applicant comprise a substrate having a thickness of about 60 to 200 micrometers, and a hard coating layer having a thickness

Art Unit: 1794

of about 1 micrometer to about 10 micrometers formed on at least one side of the substrate, wherein the hard coating layer has 3D structure comprising methacrylic and/or acrylic polymer crosslinked with each other, and said polymers having a hydroxyl value as claimed in claims 17 and 22. Further, the methacrylic and/or acrylic polymers of Tomoko and that of Applicant comprise a HALS-hybrid methacrylic or acrylic polymer. Therefore, the plastic films of Tomoko and that of Applicant are structurally and compositionally equivalent. Accordingly, the swelling rate of the substrate as claimed would be present. The burden is shifted to Applicant to prove it otherwise (*In re Fitzgerald*, 205 USPQ 594).

9. Claims 17, 18, 22, and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Tomoko et al. (JP 2001-232730, Machine translation provided) in view of Kazuji et al. (JP 2001-059068, Machine translation provided).

10. The invention of Tomoko is previously disclosed. Tomoko is silent as to teaching the hard coating layer having acrylic or methacrylic polymer having hydroxyl value as claimed and the methacrylic or acrylic polymers comprise HALS-hybrid methacrylic or acrylic polymer. However, Kazuji discloses a resin for coating and a coating material that is curable at low temperatures, wherein the coating possesses properties of high adhesiveness and protection to substrate, scratch-resistance and weatherability (abstract). Moreover, the coating composition of Kazuji contains acrylic resin having carboxyl and hydroxyl groups. Further the acrylic resin of Kazuji is drastically improved in resistance to weather when the acrylic resin is copolymerized with a polymerizable, UV-absorptive, unsaturated monomer (R-UVA) and polymerizable, light stable,

Art Unit: 1794

unsaturated monomer (R-HALS), to protect the coating film itself and base (abstract).

Further, the acrylic resin of Kazuji has hydroxyl value of 0.5 to 120 mgKOH (0014).

According to Kazuji, when a hydroxyl value is less than 0.5 mgKOH the tendency for the hardenability of a paints gets worse and if the hydroxyl value exceeds 120 mgKOH, the storage stability of paint may worsen and coating operability may get worse (0014).

Additionally, Kazuji discloses copolymerization of R-HALS with acrylic monomer at 0020. The disclosure of Kazuji at paragraph 0020 along with the disclosure in abstract read on methacrylic and/or acrylic polymers comprises HALS-hybrid methacrylic or acrylic polymer as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the hard coating composition of Kazuji in the invention of Tomoko, motivated by the desire to provide hard coating layer that has excellent properties of high adhesiveness towards substrate, scratch-resistance and weatherability.

11. As to the claim limitations of the swelling rate of a substrate of no more than 5%, it is reasonable to presume that the substrates of Tomoko as modified by Kazuji has swelling rate of no more than 5% as claimed. The support for said presumption is based on the fact that the plastic films of Tomoko as modified by Kazuji and that of Applicant comprise a substrate having a thickness of about 60 to 200 micrometers, and a hard coating layer having a thickness of about 1 micrometer to about 10 micrometers formed on at least one side of the substrate, wherein the hard coating layer has 3D structure comprising methacrylic and/or acrylic polymer crosslinked with each other, and said polymers having a hydroxyl value as claimed in claims 17 and 22. Further, the

methacrylic and/or acrylic polymers of Tomoko as modified by Kazuji, and that of Applicant comprise a HALS-hybrid methacrylic or acrylic polymer. Therefore, the plastic films of Tomoko as modified by Kazuji, and that of Applicant are structurally and compositionally equivalent. Accordingly, the swelling rate of the substrate as claimed would be present. The burden is shifted to Applicant to prove it otherwise (*In re Fitzgerald*, 205 USPQ 594).

12. Claims 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomoko et al. (JP 2001-232730, Machine translation provided) as applied to claims 17 and 22 above, in view of Shibata et al. (US 2001/0020515A1).

13. The invention of Tomoko is previously disclosed. Tomoko is silent as to teaching a layer of PSA having a thickness of about 1 micrometer to about 300 micrometers. However, Shibata discloses a sheet for protecting paint film comprising a substrate and formed on one side thereof a rubber based PSA layer (abstract), wherein the thickness of the PSA is from 3 to 100 micrometers (0046). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the PSA layer with the thickness as taught by Shibata in the invention of Tomoko, motivated by the desire to easily stick the plastic film onto a substrate that needs to be protected.

14. Claims 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomoko et al. (JP 2001-232730, Machine translation provided) in view of Kazuji et al. (JP 2001-059068, Machine translation provided) as applied to claims 17 and 22 above, and further in view of Shibata et al. (US 2001/0020515A1).



Art Unit: 1794

15. The invention of Tomoko as modified by Kazuji is previously disclosed. Tomoko is silent as to teaching a layer of PSA having a thickness of about 1 micrometer to about 300 micrometers. However, Shibata discloses a sheet for protecting paint film comprising a substrate and formed on one side thereof a rubber based PSA layer (abstract), wherein the thickness of the PSA is from 3 to 100 micrometers (0046). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the PSA layer with the thickness as taught by Shibata in the invention of Tomoko, motivated by the desire to easily stick the plastic film onto a substrate that needs to be protected.

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kageishi et al. (WO 02/083800A1), US 2004/0220306A1 is relied upon as an equivalent document for convenience. Kagishi discloses curable coating comprising acrylic resin A (abstract) and light stable unsaturated monomer (R-HALS) is copolymerized in the acrylic resin (0026-0027). Additionally, Myers (US 4,885,347) discloses chemically bonding hindered amine stabilizers to polymers (abstract) such as acrylic polymers (column 10 lines 59 to column 11 lines 1-10). Also column 1 lines 13-65 and column 2 lines 1-5 of Myers is relevant to Applicant's invention.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/804,407  
Art Unit: 1794

Page 9

/A. D./  
Examiner, Art Unit 1794

Hai Vo  
/Hai Vo/  
Primary Examiner, Art Unit 1794